CLAIMS

1.   An RNA molecule having a length of less than 49 bases and having a sequence effective to mediate degradation or block translation of mRNA that is the transcriptional product of a target gene, wherein the target gene is selected from among genes encoding clusterin, IGFBP-5, IGFBP-2, both IGF-BP-2 and 5 simultaneously, MITF, and B-raf..

2.   The RNA molecule of claim 1, wherein the molecule has a length of 16 to 29 nucleotides.

3.   The RNA molecule of claim 2, wherein the molecule has a length of 18 to 23 nucleotides.

4.   The RNA molecule of claim 3, wherein the target gene is clusterin and the RNA molecule consists of sequences selected from among Seq ID Nos 1 to 16, 58, 59, 61, 62, 64, 65, 67 and 68.

5.   The RNA molecule of claim 3, wherein the target gene is IGFBP-5 and the RNA molecule consists of sequences selected from among Seq ID Nos 17 to 30.

6.   The RNA molecule of claim 3, wherein the target gene is IGFBP-2 and the RNA molecule consists of sequences selected from among Seq ID Nos 31 to 38.

7.   The RNA molecule of claim 3, wherein the target genes are both IGFBP-2 and IGFBP-5, simultaneously, and the RNA molecule consists of sequences selected from among Seq ID Nos 39 to 44.

8. The RNA molecule of claim 3, wherein the target gene is Mitf and the RNA molecule consists of sequences selected from among Seq ID Nos 45 to 50.

9. The RNA molecule of claim 3, wherein the target gene is B-raf and the RNA molecule consists of sequences selected from among Seq ID Nos 51 to 58.

10. A pharmaceutical composition comprising an RNA molecule having a length of less than 49 bases and having a sequence effective to mediate degradation or block translation of mRNA that is the transcriptional product of a target gene, wherein the target gene is selected from among genes encoding clusterin, IGFBP-5, IGFBP-2, both IGF-BP-2 and 5 simultaneously, MITF, and B-raf, together with a pharmaceutically acceptable carrier.

11. The pharmaceutical composition of claim 10, wherein the pharmaceutically acceptable carrier is a sterile injectable solution.

12. The pharmaceutical composition of claim 11, wherein the molecule has a length of 16 to 29 nucleotides.

13. The pharmaceutical composition of claim 12, wherein the molecule has a length of 18 to 23 nucleotides.

14. The pharmaceutical composition of claim 13, wherein the target gene is clusterin and the RNA molecule consists of sequences selected from among Seq ID Nos 1 to 16, 58, 59, 61, 62, 64, 65, 67 and 68.

15. The pharmaceutical composition of claim 13, wherein the target gene is IGFBP-5 and the RNA molecule consists of sequences selected from among Seq ID Nos 17 to 30.

16.   The pharmaceutical composition of claim 13, wherein the target gene is IGFBP-2 and the RNA molecule consists of sequences selected from among Seq ID Nos 31 to 38.

17.   The pharmaceutical composition of claim 13, wherein the target genes are both IGFBP-2 and IGFBP-5, simultaneously, and the RNA molecule consists of sequences selected from among Seq ID Nos 39 to 44.

18.   The pharmaceutical composition of claim 13, wherein the target gene is Mitf and the RNA molecule consists of sequences selected from among Seq ID Nos 45 to 50.

19.   The pharmaceutical composition of claim 13, wherein the target gene is B-raf and the RNA molecule consists of sequences selected from among Seq ID Nos 51 to 58.

20.   A method of treating a cancer that expresses a target protein selected from the group consisting of clusterin, IGFBP-5, IGFBP-2, MITF, and B-raf, comprising administering to an individual in need of treatment an RNA molecule having a length of less than 49 bases and having a sequence effective to mediate degradation or block translation of mRNA that is the transcriptional product of a target gene, wherein the target gene is selected from among genes encoding clusterin, IGFBP-5, IGFBP-2, both IGF-BP-2 and 5 simultaneously, MITF, and B-raf..

21.   The method of claim 20, wherein the RNA molecule has a length of 16 to 29 nucleotides.

22.   The method of claim 21, wherein the RNA molecule has a length of 18 to 23 nucleotides.

23.   The method of claim 22, wherein the target gene is clusterin and the RNA molecule consists of sequences selected from among Seq ID Nos 1 to 16, 58, 59, 61, 62, 64, 65, 67 and 68.

24.   The method of claim 22, wherein the target gene is IGFBP-5 and the RNA molecule consists of sequences selected from among Seq ID Nos 17 to 30.

25.   The method of claim 22, wherein the target gene is IGFBP-2 and the RNA molecule consists of sequences selected from among Seq ID Nos 31 to 38.

26.   The method of claim 22, wherein the target genes are both IGFBP-2 and IGFBP-5, simultaneously, and the RNA molecule consists of sequences selected from among Seq ID Nos 39 to 44.

27.   The method of claim 22, wherein the target gene is Mitf and the RNA molecule consists of sequences selected from among Seq ID Nos 45 to 50.

28.   The method of claim 22, wherein the target gene is B-raf and the Method consists of sequences selected from among Seq ID Nos 51 to 58.

29.   The method of claim 20, wherein the cancer is selected from the group consisting of sarcomas, renal cell carcinoma, breast cancer, bladder cancer, lung cancer, colon cancer, ovarian cancer, anaplastic large cell lymphoma and melanoma.

30.   A method of treating Alzheimer's disease, comprising administering to an individual in need of treatment an RNA molecule that consists of sequences selected from among Seq ID Nos 1 to 16, 58, 59, 61, 62, 64, 65, 67 and 68.